

Title (en)
SEMICONDUCTOR BIOSENSORS

Title (de)
HALBLEITER-BIOSENSOREN

Title (fr)
BIOCAPTEURS À SEMICONDUCTEURS

Publication
EP 2440651 B1 20190313 (EN)

Application
EP 10725125 A 20100610

Priority

- EP 2010058183 W 20100610
- EP 09007719 A 20090610
- EP 10000550 A 20100120
- EP 10725125 A 20100610

Abstract (en)
[origin: WO2010142773A2] The present invention relates to semiconductor devices, in particular to a device for monitoring a cell signal such as an electrical signal produced by living cells in response to external stimulation, optionally in real time, comprising (a) at least one discrete area comprising a high electron mobility transistor (HEMT); and (b) non-excitable cells attached to said HEMT (HEMT element). Preferably, said device, and preferably said at least one discrete area which comprises a HEMT, has a surface suitable for cell attachment or growth. Accordingly, the device can be applied in uses and methods for monitoring a cell signal such as an electrical signal produced by living cells in response to external stimulation, optionally in real time. Likewise, the device can be applied for screening compounds that reverse, protect from and/or shield cells from external stimuli which cause damage to cells. Also, kits comprising the device are an aspect of the present invention.

IPC 8 full level
C12M 1/34 (2006.01); **G01N 27/414** (2006.01)

CPC (source: EP US)
G01N 33/48728 (2013.01 - EP US); **G01T 1/02** (2013.01 - EP US)

Citation (examination)
WO 2009013101 A1 20090129 - BOSCH GMBH ROBERT [DE], et al & US 2011132779 A1 20110609 - LOUGHMAN ROBERT [US], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
WO 2010142773 A2 20101216; WO 2010142773 A3 20110609; CA 2765314 A1 20101216; EP 2440651 A2 20120418;
EP 2440651 B1 20190313; JP 2012529638 A 20121122; JP 5744857 B2 20150708; US 2012171715 A1 20120705; US 9880288 B2 20180130

DOCDB simple family (application)
EP 2010058183 W 20100610; CA 2765314 A 20100610; EP 10725125 A 20100610; JP 2012514477 A 20100610; US 201013377551 A 20100610